

## **OCEAN DATA AND INFORMATION NETWORK FOR THE CARIBBEAN AND SOUTH AMERICA REGION (ODINCARSA)**

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**ABSTRACT:** ODINCARSA was set up primarily as a mechanism for assessing the current and potential state of development of national data centers and to create the means for mutual capacity-building in South America and the Caribbean. It further sought to develop a cooperation network for managing and exchanging oceanographic data and information within these regions. ODINCARSA's advent was consolidated by the staging of the first planning workshop, held on the premises of the Oceanographic Institute of the Ecuadorian Navy, in Guayaquil, and attended by Argentina, Brazil, Colombia, Chile, Ecuador, Peru, Panama, Trinidad and Tobago, Bahamas, Belize, Dominica, Mexico, Cuba, observers from the United States, and Spain. Also present were Dr. Paul Geerders and the IOC staff, Vice-Admiral Marcos Leal, Mr. Peter Pissierssens and Dr. César Toro.

The concept behind ODINCARSA is that the national data centers cooperating with the network can improve their staff skills both within the centers themselves and nationwide, and that they can interact with the national coordinators and the regional coordinator in order to participate fully in regional projects such as: GODAR, meta data catalogues, a regional oceanographic database, the creation of Atlas, the use of directories such as GLODIR and a regional ocean portal permitting the development of member countries.

ODINCARSA is the first step towards setting up a comprehensive information network that might become the most flexible and reliable means of gaining access to other IOC programs, especially given the growing need for and arguments in favor of creating a South-East Pacific GOOS (Global Ocean Observing System).

Potentially, ODINCARSA is the means of keeping national coordinators informed of all activities relating to IOC programs, be they concerned with policy, science or training. In turn, this information will make for increased participation by the countries of the region in observation programs such as GOOS, JCOMM, GLOSS, WOCE and ARGO, assistance programs such as POGO, and, above all, in a proliferation of IODE products, so that they can be made more readily and widely available for use in the countries of the region.

ODINCARSA introduces us into an information society, a forward-looking society, a society set on reducing poverty and enhancing human development, and might well be the best springboard for achieving this difficult task.

**KEYWORDS:** NODC, EXCHANGE, PRODUCTS, METADATA, ILMS, METADATA CATALOGUE, GLODIR, GOOS

## **I. A FRUITFUL PAST**

Following several years of preparation by a group of NODC directors led by Ricardo Rojas, IODE Coordinator for the CPPS (South Pacific) Region, and with the legal advice of Dr Paul Geerders, the regions of the Caribbean and South America submitted, at the 16th session of IODE, a joint proposal to work on the regional project known as ODINLAC (Ocean Data and Information Network for Latin America and the Caribbean). This proposal was formally presented as Recommendation IODE-XVI.9 and was subsequently adopted at the IOC Assembly meeting in July 2001, with approval for its execution. The initiative was renamed OCEAN DATA AND INFORMATION NETWORK FOR THE CARIBBEAN AND SOUTH AMERICA REGION (ODINCARSA).

ODINCARSA was set up primarily as a mechanism for assessing the current and potential state of development of the National Oceanographic Data Centers (NODCs), members of the IODE program, and to create the means for mutual capacity-building in South America and the Caribbean. It further sought to develop a cooperation network for managing and exchanging oceanographic data and information within these regions. ODINCARSA's advent was consolidated by the staging of the first planning workshop, held on the premises of the Oceanographic Institute of the Ecuadorian Navy, in Guayaquil, and attended by representatives from Argentina, Brazil, Colombia, Chile, Ecuador, Peru, Panama, Trinidad and Tobago, Bahamas, Belize, Dominica, Mexico, Cuba, and observers from the United States, and Spain. Also present were Dr Paul Geerders and the IOC staff, Vice-Admiral Marcos Leal, Mr. Peter Pissierssens and Dr César Toro.

One of the first tasks entrusted to the workshop was to turn words into practical action, specifying what could be fulfilled and what was on offer. In that respect, several priorities were put forward, including the needs of already operative NODCs or the steps needed to set up new ones in the region, the opportunities for producing regional inventories of oceanographic data and information, research institutes and researchers, and the capacities of centers to improve data management by means of standard-setting.

## **II. THE FIRST ODINCARSA WORKSHOP**

The holding of this workshop could be seen as the first major step towards extending ODINCARSA's initial goals and expectations. Participants entered into a lively debate about matters of concern to them, the current limitations on the needs of NODCs or similar centers in other countries, in terms of technical or application requirements in each country. However, what gradually emerged from the meeting was the lack of knowledge in the Caribbean and South America of IOC's operational services and programs. It was during these discussions that it was decided that information systems needed to be reinforced within the region, concerning both IODE activities and IOC operational programs. The meeting also identified a potential powerful alliance between IODE and GOOS and an interaction between IODE and JCOMM. Specific regional projects were also pinpointed, such as Climatology for the South-East Pacific. The concept behind ODINCARSA is that the national data centers cooperating with the network can improve their staff skills both within the centers themselves and nationwide, and that they can interact with the national coordinators and the regional coordinator in order to participate fully in regional projects such as GODAR, metadata catalogues, a regional oceanographic database, the creation of Atlas, the use of directories such as GLODIR and a regional ocean portal permitting the development of member countries.

This workshop revealed that a top priority was the issue of capacity-building and training, given the region's widely differing current capacities. A country-by-country analysis was carried out in order to put together a wide-ranging set of requirements and determine the feasibility of a mechanism for mutual cooperation between the member countries, especially assistance by South American countries to Caribbean countries in relation to the development of NODCs. An efficient and smooth-running information network such as ODINCARSA could prove to be the best way of bringing about such an exchange, ensuring that this cooperation effectively goes beyond the region and making absolutely sure that each country establishes its NODC. However, these discussions revealed the member countries' growing interest in integrated library management software (ILMS), the need for MIM training courses in information management, and the possibility of providing national information centers with ILMS and establishing direct contact with organizations such as IAMS LIC for promoting exchanges of scientific information, nationally and regionally.

## **III. FROM WORDS TO DEEDS**

ODINCARSA established a pragmatic action plan based on clear-cut tasks to be performed forthwith, such as:

- The nomination of national IODE coordinators;
- Advisory mission to assist with the establishment of data and
- Information centers;
- The designation of NODCs;
- The establishment of national coordination groups;

- The appointment of the regional coordinator.

The tasks to be performed in 2002 and which finally received a budgetary allocation from IOC:

- The first ODINCARSA data management training course (Guayaquil, Ecuador);
- The first ODINCARSA information management training course (Mazatlán, Mexico).

Product and service development (currently without funding):

- Development of ODINCARSA regional metadata catalogue;
- Development of GLODIR for ODINCARSA;
- Development of GODAR project;
- Development of regional ocean database for ODINCARSA;
- Development of ODINCARSA Ocean Portal.

Linkages with other programs and organizations:

- With IAMSLIC to set up ILL services;
- Linkages with other IOC programs.

The ODINCARSA website is now ready at:

[www.odincarsa.net](http://www.odincarsa.net)

Since the ODINCARSA website provides space where member countries may place information, it can be updated flexibly in a decentralized way.

#### **IV. ODINCARSA IN THE SOUTH-EAST PACIFIC AND CARIBBEAN, POTENTIAL CHALLENGES**

Unlike the Caribbean region, South America and in particular the countries of the South-East Pacific have not maintained a homogenous level of intervention in IOC programs. Nonetheless the region has evidently worked on improving its human and technological capacity for ocean research and how it can be applied to improve the living standards of its populations. El Niño is one of the main threats facing the South-East Pacific, repeatedly attacking the region and causing incalculable damage in terms of human life and economic losses. Therefore, much of the oceanographic research in the region's countries is focused on El Niño early warning. Climate variations, interdecade oscillations and fluctuations in the system of the Humboldt Current, the very basis of the development, growth and sustenance of the coastal populations of the South-East Pacific, are also part of the research under way in the region.

The repercussions of oceanic warming in the Pacific can be felt across the continent as far away as Bolivia, Brazil, north-east Colombia and even, in extreme cases, in Argentina, Chile and Uruguay. ODINCARSA is the first step towards setting up a comprehensive information network that might become the most flexible and reliable means of gaining access to other IOC programs, especially given the growing need for and arguments in favor of creating a South-East Pacific GOOS (Global Ocean Observing System). Potentially, ODINCARSA is the means of keeping national coordinators informed of all activities relating to IOC programs, be they concerned with policy, science or training. In turn, this information will make for increased participation by the countries of the region in observation programs such as GOOS, JCOMM, GLOSS, WOCE and ARGO, assistance programs such as POGO, and, above all, in a proliferation of IODE products, so that they can be made more readily and widely available for use in the countries of the region, on a reliable scientific basis.

ODINCARSA is no longer a pilot project. It has now put down roots and will undoubtedly continue to consolidate, extending the benefits of the IOC's worldwide programs to countries that have so far found it hard to take advantage of them. On the other hand, since there is no IOC office for South America, it falls to ODINCARSA to ensure that the region can take part in the IOC structures, with full representation and dissemination of information, while at the same time providing an appropriate and accessible channel for communications.

## **V. ODINCARSA AND ITS FUTURE IN THE INFORMATION SOCIETY**

The inhabitants of the ODINCARSA region need information to grow, to educate, to anticipate and to plan. That has been reflected in the way that IODE programs have developed and ODINCARSA is the right means for bringing it about. It is necessary to keep a huge public informed not so much about pure science but about value-added products that cover the broad spectrum of information from governments to ordinary citizens. Scientific information is needed certainly, but also and above all ordinary information, applicable to millions of users in their daily lives, who in view of the growing availability of the Internet in Latin America demand the products they need for their activities.

Latin American and Caribbean society is gradually turning into an information society. ODINCARSA is one of the mainstays for realizing this goal. The regional governments have taken huge steps towards improving their ocean observation and scientific infrastructures, and now want to share in worldwide initiatives, take part in JCOMM working groups, train their scientists in international assistance programs and explore possibilities of joint scientific management and interests elsewhere in the world, by means of IOC structures. ODINCARSA is the ideal interface for this and should grow exponentially in terms of key users, focal points and finally ordinary users throughout Latin America and the Caribbean. This region has considerable potential and deserves to be promoted and launched worldwide. ODINCARSA represents the necessary impetus

and therefore needs appropriate funding. It should be seen as a strategic quantum leap for interrelations in a region that is all out to achieve growth and productivity.

The region can also offer strategic partners for ODINCARSA. They are not alone and could well increase in number since we are going to reinforce them. Our efforts will not rule out other efforts but are intended to complement them, in alliances with CPPS (Permanent Commission for the South Pacific), whose political weight in the region will be important for encouraging ODINCARSA member countries. This, in turn, will help to give CPPS worldwide publicity. The WMO region III in South America could also have the benefit of ODINCARSA, enabling it to be involved in the various JCOMM sub programs. ODINCARSA could also act as an excellent mechanism for UNDP, UNEP, GPA, ISDR, FAO, WHO and others. Indeed the general aim is to build an information society, a forward-looking society, a society set on reducing poverty and enhancing human development. ODINCARSA might well be the best springboard for achieving this difficult task.